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Hideyuki Takai

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

MCCULLEY, MEGAN CASSANDRA

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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Response to Arguments

The after final amendments are entered since the subject matter of the previous claim 4 is now the same subject matter of amended claim 1. The rejection set forth in the Final Office Action dated November 12, 2009 with regard to claim 4 now applies to claim 1.

Applicant's arguments filed February 12, 2010 have been fully considered but they are not persuasive.

A) Applicant's argument that Takai (US 2003/0059618) teaches different embodiments, Inventions I-III, which are not interchangeable and therefore the rejection draws from teachings of more than one invention is not persuasive. Disclosure of the Invention paragraphs 23-40 of Takai do not distinguish which of the 3 inventions contain which limitations, contrary to applicant's argument that paragraphs 31 and 33 do not relate to Takai's Invention III. This is not taught in Takai. It is the position of the Office that Invention III of Takai contains all the components which the Final attributes to Takai. Paragraph 97 establishes that the claimed alicyclic epoxy compound is present in Invention III. Paragraphs 94 and 134-135 teach the claimed copolymer is in Invention III. Paragraph 86 teaches the cationic polymerization initiator which is a compound which releases a substance initiating a polymerization by heating is in Invention III. Therefore, these three components, which are argued by the applicants as coming from different embodiments appear together in Invention III. Furthermore, the cationic polymerization initiators which are compounds releasing a cation initiating a

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polymerization by UV irradiation listed in Takai paragraphs 145-157 are the same compounds listed in the instant application (published paragraph 37) which the instant application reports form a cation as a result of heating. Therefore, the same compounds used in Takai to initiate based on UV irradiation are also capable of initiating based on heating, as evidenced by the instant specification.

B) Applicant's argument that Invention III does not teach the object of the instant application, which is a replacement glass substrate which is excellent in heat resistance, dimensional stability, and optical transparency, is not persuasive. The claimed composition is disclosed. The intended end use of the composition does not carry patentable weight. The properties of the composition are latent properties which would necessarily be present in the composition of Takai (see MPEP 2145 II).

C) Applicant's argument that Invention II of Takai does not achieve the desired object or properties of the instant application is not persuasive since Invention III of Takai is the closest prior art.

D) Applicant's argument that the amount 5-20 parts copolymer to 100 parts by weight epoxy appears to be incorrect in Takai is not persuasive. Paragraph 175 of Takai reads in part, "The amount of the copolymer (F) used is generally 1 to 50 parts by weight, preferably 3 to 30 parts by weight, more preferably 5 to 20 parts by weight, based on 100 parts by weight of the total amount of the alicyclic epoxy compound (A) having alicyclic epoxy group and not having ester linkage in the molecule, and the compound having alicyclic epoxy group and ester linkage in the molecule and/or epoxy compound (B) having glycidyl group." If 5 to 20 parts by weight was in error, it is not

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likely that Takai would have narrowed in on that range from broader ranges still overlapping the claimed range. Furthermore, disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments (MPEP 2123 II).

E) Applicant's argument that the oxirane oxygen concentration calculations of the Examiner are not correct is not persuasive. First, it is put forward that even if the oxirane concentration calculations done by the applicants are correct (0.23-16.0 % and 0.32-8.0 %) these ranges still overlap the claimed range (4-12%) such that a prima facie case of obviousness exists. Secondly, the Examiner argues these are not correct and the point of dispute between the two calculations is the definition of concentration of epoxy groups. Takai teaches the concentration of epoxy groups is 0.1-7.0 or 0.2-5.0 equivalents/kg (para. 142). The applicants state on page 10 of the remarks that the concentration of epoxy groups in terms of epoxy equivalents is 7.0 equivalents/kg is the same as saying 1 mole of oxygen is contained in 7 kg of resin. The Examiner contends that 7.0 equivalents/kg is the same as 7 moles of oxygen contained in 1 kg resin.

Another way of saying this is:

$$\frac{7.0 \text{ equivalents}}{\text{kg}} = \frac{7.0 \text{ mole of oxygen}}{1 \text{ kg of resin}} \quad \text{not :}$$

$\frac{7.0 \text{ equivalents}}{\text{kg}} = \frac{1.0 \text{ mole oxygen}}{7 \text{ kg of resin}}$. The latter is not how fractions are written; the former is the art accepted way to read fractions.

F) Applicant's argument that unexpected results are achieved with respect to Table II-2 in Takai is not persuasive, since Table II-2 relates to Invention II of Takai, while Invention III is the closest prior art.

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G) Applicant's argument that Invention III of Takai is missing features of the instant application is not persuasive. As set forth above, Takai teaches the cationic polymerization initiator (C), the epoxy-acrylic resin (D), the amount of the epoxy-acrylic resin (D) and the oxirane oxygen content. The intended use and latent properties argued by the applicants are also discussed above. Kawamura et al. is relied on to teach the polymerization inhibitor. In response to applicant's argument that Kawamura et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Takai and Kawamura et al. are analogous art since they are both concerned with the same field of endeavor, namely making and using epoxy containing acrylic resins.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Megan McCulley whose telephone number is (571)270-3292. The examiner can normally be reached on Monday - Thursday 7:30-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/M. M./
Examiner, Art Unit 1796